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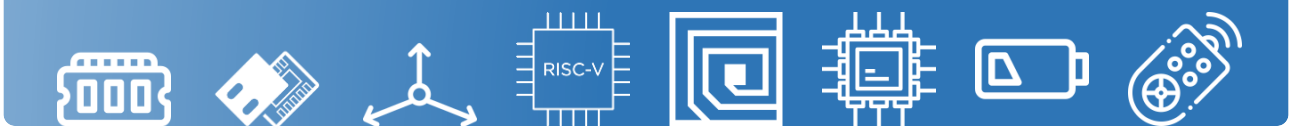
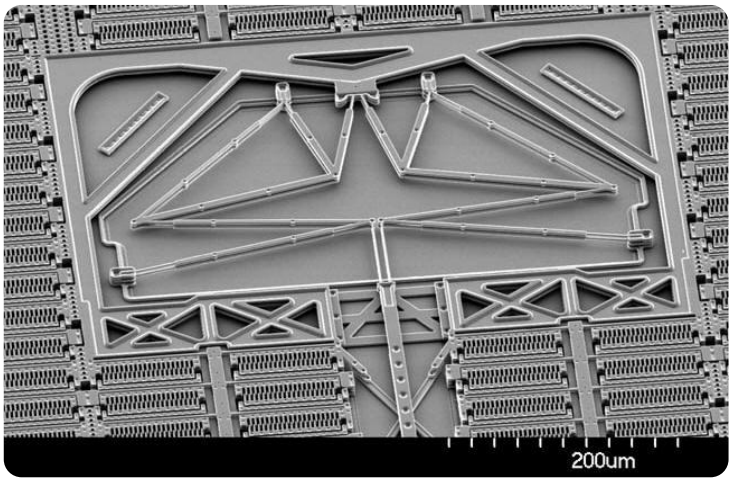
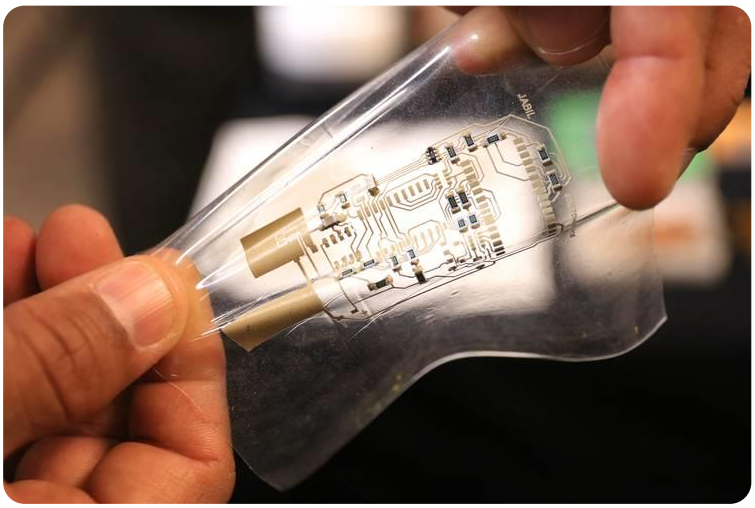
IoT for Microelectronics & VLSI Engineers





Microelectronics and VLSI technologies have a very symbiotic relationship with IoT applications, with advances in one area driving adoption in the other area. With over 50 billion devices expected to enter the markets soon, the opportunity to miniaturize the IoT devices and make them autonomous is wide open. MEMS technology is miniaturizing sensors like drives and accelerometers, as shown in the scanning electron image of a microscopic motor, and lowering their energy budget. Similarly, advances in photolithography with 7 nm processes are miniaturizing processors by increasing their transistor density. A lower power budget makes it feasible to operate the devices on harvested solar or electromagnetic energy. Flexible antennas on passive devices, like RFID tags, have been around for a while. However companies like Jabil Circuit are already pushing the frontier and printing active devices like wireless thermometers which combine (bio) sensing, specialized computation and wireless communication as a single flexible device. To complete the cycle, such flexibility in design and pricing opens up new form factors and new business models, which drives further investments in the domain.



Capsule Labs is founded by IoT industry veterans and offers foundational IoT projects to develop a better understanding of IoT solution.